

BEFORE THE
Federal Communications Commission

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FEDERAL COMMUNICATIONS COMMISSION
OFFICE OF SECRETARY

In The Matter of)

Amendment of the Commission's Rules)
Regarding Multiple Address Systems)

WT Docket No. 97-81

To: The Commission

COMMENTS
OF THE
AMERICAN PETROLEUM INSTITUTE

THE AMERICAN PETROLEUM INSTITUTE

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SUMMARY

The new licensing scheme proposed by the Federal Communications Commission ("Commission") for Multiple Address System ("MAS") spectrum ignores the large and growing demand for MAS channels by private communications users and grossly overestimates the amount of real commercial interest in this spectrum. The results of a survey that the American Petroleum Institute ("API") has conducted of its members and a wealth of other objective evidence indicate that private needs for MAS spectrum justify not only a purely private allocation in the highly congested 928/952/956 MHz MAS bands, but also the designation for private use of twenty of the forty channel pairs in the 932/941 MHz MAS band and any available MAS channels in the 928/959 MHz band.

The Commission's contention that more than 95 percent of the pending applications for the 932/941 MHz MAS band are commercial in nature is in direct contrast to the Commission's previous assessments of the very same applications and is wholly unsupported by any evidence in the record or in the Commission's database of 932/941 MHz

MAS applications. Moreover, the Commission has blatantly disregarded what the record shows it knew full well when it opened filing windows for this spectrum more than five years ago -- i.e., that some commercial entities would file speculative applications for these channels in the mistaken assumption that MAS spectrum is well suited to the provision of subscriber-based services. It is irrational, unjust and contrary to the public interest for the Commission now to rely on these speculative applications as the basis for thwarting the reasonable expectations of private applicants with clearly identified MAS needs that cannot be met from existing allocations. Further, the Commission's proposed dismissal of 50,000-plus applications more than five years after they were filed -- without even a promise to refund application fees -- is plainly unconscionable.

In addition to fulfilling its prior commitment to making 932/941 MHz channels available for private use, the Commission should strictly enforce its construction and operational requirements so as to ensure that MAS spectrum previously licensed for either private or commercial purposes is used efficiently. The efficient use of MAS spectrum further requires that private MAS channels continue

to be licensed on a site-by-site basis. Wide-area geographic licensing simply is not suited to the narrowly defined operations of most private MAS licensees.

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The American Petroleum Institute ("API"), by its attorneys, pursuant to Section 1.415 of the Rules and Regulations of the Federal Communications Commission ("Commission"), respectfully submits the following Comments in response to the Commission's Notice of Proposed Rule Making ("Notice")^{1/} regarding the allocation, licensing and operation of Multiple Address System ("MAS") channels.

^{1/} 62 Fed. Reg. 11,407 (March 12, 1997). While the Comment deadline cited in the Notice is April 21, 1997, this deadline was extended to May 1, 1997 by Order of the Commission dated April 18, 1997 (DA 97-839).

I. BACKGROUND

1. API is a national trade association representing approximately 300 companies involved in all phases of the petroleum and natural gas industries, including exploration, production, refining, marketing and transportation of petroleum, petroleum products and natural gas. The API Telecommunications Committee is one of the standing committees of the organization's Information Systems Committee. The Telecommunications Committee evaluates and develops responses to state and federal proposals affecting telecommunications facilities used in the oil and gas industries.

2. API's Telecommunications Committee is supported and sustained by licensees that are authorized by the Commission to operate, among other telecommunications systems, point-to-point and point-to-multipoint (e.g., MAS) facilities in the Private Operational-Fixed Microwave Service ("POFS"). API's members utilize POFS systems to serve a variety of vital telecommunications requirements, including communications between remote oil and gas exploration and production sites, for supervisory control and data acquisition ("SCADA") systems, to communicate with refineries and to extend circuits to remote pipeline pump

and compressor stations. The oil and gas industries were among the pioneers in the development of private microwave, utilizing their systems to monitor and operate petroleum and natural gas pipelines.

3. MAS assignments are used in the production of oil and gas from both on-shore and offshore oil wells, as well as in the remote operation of pipeline facilities. For example, MAS alarm units are used to signal abnormal production levels, thereby indicating the need for production personnel to take corrective action.

4. Moreover, the petroleum, natural gas and energy distribution industries increasingly have relied upon MAS assignments from the 900 MHz band for the operation of SCADA systems. These systems, which involve two-way traffic requiring paired channels, allow a master station to control and monitor the status of a multitude of measurement valves and tolerance limits at wellheads, compressor stations and valves, thus eliminating the need for constant manual surveillance. In particular, SCADA systems are deployed in production fields and along pipelines to monitor and adjust a variety of operating parameters, such as temperature, pressure level and volume. These monitoring functions are

essential to satisfy safety and environmental objectives and to maintain an acceptable level of production.

5. Due to the importance of MAS and other private microwave systems to the operations of its members, API has participated in all of the Commission's major rule making proceedings addressing private microwave use of the spectrum. Accordingly, API has participated in the Commission's previous proceedings involving MAS spectrum, including the Part 94 (now Part 101) Multiple Address proceeding (PR Docket No. 87-5) and the 932-935/941-944 MHz Fixed Allocation proceeding (Gen. Docket No. 82-243). As API demonstrated in those proceedings (and as further discussed below), there has existed for many years a critical shortage of spectrum that can be used for private MAS transmissions. Through its Notice, the Commission now threatens to take away with one hand the remedy that it crafted with the other over the course of a number of years in order to alleviate this spectrum shortage.

II. COMMENTS

A. **There Is Abundant Demand for a Purely Private Allocation in the 928/952/956 MHz MAS Bands**

6. In its Notice, the Commission tentatively concluded that the 928/952/956 MHz MAS bands should be redesignated exclusively for private use. API strongly urges the Commission to adopt this proposal. As shown below, the existing and projected internal communications requirements of private MAS users will more than adequately support such a purely private allocation.

7. The Commission stated in its Notice that the 928/952/956 MHz bands "appear[] currently to be used overwhelmingly for private service." Notice at ¶ 12. In this regard, the Commission estimated from a review of its licensing data base that about 70% of the licenses granted for use in this spectrum have been to public safety, business or industrial entities to satisfy their internal communications needs. API believes that, if the Commission were to assess the nature of the licensees that actually are operating in these bands, it would discover that far greater than 70% are private users. In particular, API expects that many of the entities that have become licensed to use these bands for commercial purposes have done so on a purely

speculative basis and have subsequently found this spectrum to be largely unsuited to commercial use; accordingly, it is quite likely that many of these entities have failed to construct their systems and do not ever intend to initiate service.

8. Private users, on the other hand, have continued on a steady basis to license, construct and operate systems in these MAS bands. In response to the Notice, API conducted a survey of the existing and future MAS requirements of its member companies.^{2/} With regard to current operations, 25 of the 29 survey respondents reported that they are using 928/952 MHz MAS channels, while 10 are using 956 MHz MAS channels. The total number of 928/952 MHz MASs presently employed by the respondents is 760. In many instances, these systems serve important safety and environmental functions that could not be provided as effectively by commercial systems or other types of private channels.

9. API's survey results also indicate that projected private MAS spectrum needs justify the redesignation of the 928/952/956 MHz bands exclusively for private use. Most

^{2/} API transmitted its survey to 38 entities and received 29 responses. A copy of API's survey form is attached hereto as Exhibit A.

significantly, the responding API members reported that, if sufficient spectrum were available, they would install a total of more than 100 MASSs within the next year, more than 300 additional MASSs within 1-3 years, approximately 400 additional MASSs within 3-5 years and approximately 1,000 additional MASSs within 5-10 years.

10. Other objective evidence also supports the conclusion that the demand in the petroleum and natural gas industries for private MAS channels will continue to rise for at least a number of years. In the petroleum industry, companies frequently rely upon MAS technology in their efforts to refit existing wells in order to extract more oil from the formations. Production trends in the industry over the past several years reflect a steady increase in the number of active wells that are being serviced in this manner. Specifically, the average number of "active well-servicing units" in operation has risen from 2,961 in 1994, to 3,043 in 1995, to 3,425 in 1996.^{3/} The anticipated continuance of this trend will result in a corresponding increase in the demand by oil companies for new MAS channels.

^{3/} These statistics were released by the American Association of Oil Well Servicing Contractors and published in the Department of Energy's Monthly Energy Review (March 1997).

11. Companies that operate interstate pipelines also are likely to face a growing need for private MAS frequencies. In implementing the Natural Gas Policy Act of 1978, the Federal Energy Regulatory Commission has enacted regulations which -- effective April 1, 1996 -- require these companies to provide for electronic dissemination on the first business day of each calendar quarter of an index of all of their firm transportation and storage customers under contract as of that date. See 18 C.F.R.

§ 284.106(c)(1).^{4/} The information included in the quarterly index must be available on the electronic bulletin board until the next quarterly index is established, and the electronic files must be archived for at least three years. 18 C.F.R. § 284.106(c)(4). Because point-to-multipoint systems provide an effective means for gathering and disseminating the requisite information, many pipeline companies likely will have an ongoing need for MAS channels to comply with these new reporting requirements.

12. In light of the foregoing, API fully supports the Commission's proposal to redesignate the 928/952/956 MHz

^{4/} For each customer receiving firm transportation or storage service, the index must include: the full legal name of the customer; the rate schedule number of the service being provided; the contract effective date; maximum daily contract or storage quantity. 18 C.F.R. § 284.106(c)(3).

bands for exclusive private use.^{5/} As further discussed below, however, the 928/952 MHz MAS band already is highly congested in many areas. As a result, it is insufficient to meet even the existing demand for private MAS paired channels. API believes that the Commission could alleviate some of this congestion through the strict enforcement of its construction requirements. When licensees fail to construct their systems in accordance with the Commission's rules -- as API understands to be the case with a significant number of licensees in the 928/952 MHz band -- spectrum that could be put to valuable use by other parties simply lies idle. To rectify this situation, API urges the Commission to determine which licensees are in violation of applicable construction requirements and to initiate proper remedial action to make any unused channel assignments available for actual use. Otherwise, the designation of this band for purely private use will, as a practical matter, be a meaningless measure to many of the entities that seek to construct new MASs to satisfy their internal communications requirements.^{6/}

^{5/} API also believes that, regardless of the particular allocation or licensing rules that the Commission ultimately adopts for these bands, incumbents should be permitted to operate in accordance with their existing authorizations, without a threat of harmful interference from new licensees.

^{6/} API also notes that there are a number of mutually exclusive applications for private use of MAS channels in
(continued...)

**B. The 932/941 MHz Band Should Not Be Designated
Exclusively for Commercial Services**

13. As discussed above, API strongly supports the Commission's proposal to create a purely private allocation in the 928/952/956 MHz MAS bands. Unfortunately, however, this measure will hardly serve to relieve the critical shortage of available channels for private MAS use. In fact, the scheme proposed in the Notice would not even sustain the status quo. Rather, the reservation of the already over-crowded 928/952/956 MHz band for private users, coupled with the redesignation of the 928/959 MHz and 932/941 MHz MAS bands for exclusive commercial use, would lead to a substantial decrease in the number of channels available for private use and, as a result, will exacerbate the current shortage. Moreover, API believes that the Commission's estimate of the extent of commercial interest in the 932/941 MHz band is vastly overinflated. Accordingly, API strongly urges the Commission to set aside a portion of this band for exclusive use by private licensees.

6/ (...continued)

the 928/952 MHz band which have been pending for several years. As these applications are not subject to the processing freeze imposed by the Commission on commercial applications for this band, API requests that the Commission initiate appropriate lottery proceedings as soon as possible.

**1. The Commission's Conclusion That the
932/941 MHz MAS Band Is Principally a
Subscriber-Based Service Directly Contradicts
All Available Evidence**

14. The Commission's proposal to redesignate the 932/941 MHz band for exclusive commercial use and to auction geographic area licenses for this spectrum rests, in its entirety, upon a faulty foundation. This faulty foundation is the Commission's conclusion that "over 95 percent" of the more than 50,000 applications for MAS assignments from the 932/941 MHz band "were filed by entities seemingly proposing to use their licenses principally to provide subscriber-based services." Notice at ¶ 10. Indeed, the Commission's repeated use of qualifying language such as "seemingly" and "principally" and its reference to its assessment of these applications as merely a "preliminary examination" indicate that not even the Commission has confidence in its conclusions. See Notice at ¶¶ 7, 10, 11 and 49.

15. There are many good reasons for the Commission's apparent inability to state its "findings" with any conviction. To begin with, the results of the Commission's "preliminary examination" are in direct contrast to all of the Commission's previous assessments regarding the principal uses of MAS spectrum, in general,

and the nature of the pending 932/941 MHz band applications, in particular. As the Commission acknowledges, it determined several years ago during the course of its proceeding to implement Section 309(j) of the Communications Act (i.e., the "competitive bidding" docket) that Private Operational-Fixed Microwave ("POFM") MAS spectrum does "not qualify as subscriber-based and therefore should not be subject to competitive bidding." Notice at ¶ 7. Accordingly, the Commission further concluded at that time that it would not be appropriate to use competitive bidding to award the 50,000-plus pending applications for assignments from the 932/941 MHz MAS band. Id.

16. A closer look at the Commission's earlier analysis of POFM MAS spectrum and the pending applications for the 932/941 MHz MAS band, together with the history of the Commission's decision to allocate the 932/941 MHz band to MAS services, indicates that it is the Commission's initial determinations (rather than its current ones) which are most worthy of credibility. With regard to the more than 50,000 applications which have been pending since the early months of 1992, the Commission stated in its Notice of Proposed Rule Making in the competitive bidding proceeding that "[a] substantial number of these applications were filed by federal government applicants as well as by

applicants who would use these frequencies for 'private service.'^{7/} As a result, the Commission requested comment on its tentative conclusions that the principal use of this spectrum is for non-subscriber services and that the pending applications should not be subject to competitive bidding.^{8/}

17. Although only three parties commented on the Commission's proposed findings, the views of these commenters were unanimous and un rebutted: all "argue[d] strongly that the MAS is principally used for private service."^{9/} Thus, hardly more than three years ago, not a single party contended, in response to the Commission's explicit inquiry, that MAS is primarily a subscriber-based service.^{10/} Noting that the comments it had received comported with its own experience, the Commission exempted MAS spectrum from competitive bidding and indicated that any

^{7/} Implementation of Section 309(j) of the Communications Act -- Competitive Bidding, PP Docket No. 93-253, *Notice of Proposed Rule Making*, 8 FCC Rcd 7635 at n.156 (Oct. 12, 1993) (emphasis added).

^{8/} Id.

^{9/} Implementation of Section 309(j) of the Communications Act -- Competitive Bidding, PP Docket No. 93-253, *Second Report and Order*, 9 FCC Rcd 2348 at ¶ 35 (Apr. 20, 1994).

^{10/} The absence of such comments cannot be attributed to a lack of awareness of the Commission's request, as more than 200 parties (including many commercial service providers) responded to other aspects of the Commission's Notice of Proposed Rule Making in the competitive bidding docket.

of the pending applications which were mutually exclusive would be resolved by lottery.^{11/}

18. The Commission's rejection of these reasoned conclusions in its recent Notice is particularly astounding in light of the fact that the Commission's initial decision to designate new MAS spectrum in the 932/941 MHz band was the result of its determination that existing private MAS channels had become too congested. In the Commission's proceeding to make the 932-935 MHz and 941-944 MHz bands available for fixed service usage (initiated in 1982), the Commission originally had proposed to allocate this entire 6 MHz of spectrum for point-to-point operations. Noting, however, in its Third Notice of Proposed Rule Making that "the paired private multiple address (point-to-multipoint) frequencies at 928-929 MHz and 952-953 MHz are becoming saturated in some areas," the Commission requested comment as to "whether there is a requirement for multiple address systems that should be satisfied in this allocation."^{12/}

^{11/} Id. at ¶ 35 and n.25.

^{12/} Amendment of Parts 1, 21, 74 and 94 of the Commission's Rules to Establish Service and Technical Rules for Government and Non-Government Fixed Service Usage of the Frequency Bands 932-935 MHz and 941-944 MHz, GEN Docket No. 82-243, *Third Notice of Proposed Rule Making*, 2 FCC Rcd 1608 at ¶ 5 (March 16, 1987) (emphasis added).

19. All commenters that addressed this issue cited a shortage of existing MAS frequencies and supported the designation of at least some new frequencies for MAS use.^{13/} Because the Commission found, based upon these comments, that both private users and common carriers have point-to-multipoint, as well as point-to-point, requirements,^{14/} it designated 1 MHz of spectrum for point-to-multipoint use and authorized "equal access for each type of user."^{15/}

^{13/} Amendment of Parts 1, 21, 74 and 94 of the Commission's Rules to Establish Service and Technical Rules for Government and Non-Government Fixed Service Usage of the Frequency Bands 932-935 MHz and 941-944 MHz, GEN Docket No. 82-243, *Second Report and Order*, 4 FCC Rcd 2012 at ¶ 9 (Feb. 28, 1989).

^{14/} The Commission made no attempt to quantify which group (*i.e.*, private users or common carriers) had greater requirements for MAS channels. API expressed a need in its comments for 1.5 MHz of MAS spectrum for private use, and the Utilities Telecommunications Council ("UTC") stated that at least some of the frequencies in question should be used to satisfy private MAS requirements. In addition, Motorola, Inc. recommended that 1.2 MHz be employed for point-to-multipoint use, while the Central Station Electrical Protection Association argued that there was a need for additional MAS frequencies for the alarm industry. Finally, Gencom Incorporated and Omni Communications, Inc., in a joint filing, requested 1 MHz of point-to-multipoint spectrum for use in common carrier transmitter control operations. *Id.* at ¶¶ 9-10. It certainly cannot be concluded from this mix of comments that the need for MAS frequencies is principally subscriber-based.

^{15/} *Id.* at ¶ 11.

20. The Commission clearly viewed this measure as a vehicle for mitigating an existing shortage of private MAS frequencies. On October 27, 1988 -- about four months before the Commission decided to allocate part of the 932/941 MHz band for private and commercial point-to-multipoint use -- API had filed a Petition for Rule Making which asked the Commission to reallocate for private MAS and point-to-point operations 200 channel pairs in the 896-901 MHz and 935-940 MHz bands, in areas more than 100 miles from the top 50 urban markets. These channels were allocated in 1986 for use by Specialized Mobile Radio ("SMR") licensees, but had not yet been made available outside the largest 50 markets. In an Order released several months after the Commission's decision to allocate 1 MHz of spectrum in the 932/941 MHz band for MAS, the Commission dismissed API's Petition.^{16/} Citing its ruling in the 932/941 MHz proceeding, the Commission noted that it recently had allocated an additional 40 channel pairs for MAS operations and assured API that "[t]his spectrum should

^{16/} Amendment of Parts 2 and 94 of the Commission's Rules to Allocate Spectrum in the 896-901 MHz and 935-940 MHz Frequency Bands for Multiple Address System and Point-to-Point Operations, RM-6579, Order, 4 FCC Rcd 4979 at ¶ 5 (June 19, 1989).

provide relief for the growing demand for fixed operations."^{17/}

21. Faced with this substantial record and history of experience indicating that MAS is primarily a private service and that the 932/941 MHz MAS band was created to alleviate a shortage of private MAS frequencies, the Commission now claims that it "appears that the proposed use of some of the MAS spectrum has changed" since this same issue was addressed in the Commission's competitive bidding docket in 1993-1994. Notice at ¶ 49. Specifically, the Commission contends that over 95% of the pending applications were filed by entities planning to provide a subscriber-based service.

22. API does not understand what possibly could have "changed" since the Commission initially determined that the 932/941 MHz MAS band was primarily a private service. After all, the Commission had precisely the same information before it in the competitive bidding docket (which was opened in 1993) that it does today. The windows for filing applications for assignments from the 932/941 MHz

^{17/} Id. The Commission also found that API's Petition was premature, as it was too early to determine whether SMR services would take hold in the areas outside of the top 50 markets.

MAS band had closed in 1992, and no additional applications for this spectrum have been accepted. Nor does the Commission offer any evidence that the actual use of existing MAS bands has become more commercial or that the demand for private MAS spectrum has declined since the Commission recognized a shortage of these frequencies in 1989. Indeed, it appears that all that has changed is that the Commission has raised more than \$20 billion for the U.S. Treasury by auctioning licenses for services other than MAS and now would like to add to its list of auctionable spectrum.

23. Seeking to have a meaningful opportunity to respond to the Commission's proposed treatment of the 932/941 MHz MAS band, UTC filed a motion on April 8, 1997 in which it asked the Commission to supplement the record in this proceeding with information that supports its characterization of the vast majority of the pending 932/941 MHz MAS applications as "seemingly proposing to use their licenses principally to provide subscriber-based services." The Commission denied this motion on April 18, 1997.^{18/} In so doing, the Commission claimed, without

^{18/} In the Matter of Amendment of the Commission's Rules Regarding Multiple Address Systems, WT Docket No. 97-81, Order (Apr. 18, 1997).

further explanation, that its assessment of the 932/941 MHz MAS applications was made using its "staff's expertise" upon reviewing the applications in paper form and as input into its licensing database.^{19/} The Commission then conceded that "the paper versions of the applications were destroyed in a flood in Gettysburg on June 18-19, 1996" and stated that data recorded in the Commission's database is available for review by the public.^{20/}

24. Nothing in the Commission's licensing database supports its contentions regarding the nature of the pending 932/941 MHz MAS applications. For each such application reflected in the database, the only available information is the file number, the applicant's name and address, the receipt date, the proposed transmitter location and the applicable radio service/rule section.^{21/} There is absolutely no indication as to whether the applicant intends to use its proposed new facilities for private or commercial purposes. The fact that many of the applicants apparently are eligible to operate under the Business Radio Service is

^{19/} Id. at ¶ 2.

^{20/} Id.

^{21/} On April 25, 1997, Elizabeth Buckley, a licensing specialist employed by Keller and Heckman LLP (counsel for API) visited the Commission's Public Reference Room in Gettysburg and personally examined the database in question.

not indicative of the intended use, as licensees in this service may provide either commercial or private service. See 47 C.F.R. § 90.75(a). API also questions the completeness and the reliability of the database, given that API has been unable to locate any evidence in the database of numerous 932/941 MHz MAS applications filed by its member companies.

25. In light of the absence of any support for the Commission's 932/941 MHz MAS proposals in either the record of this proceeding or the Commission's database, as well as the fact that interested parties have no way of verifying whether there was any information in the flood-destroyed applications that would support these proposals, API reiterates UTC's request that the Commission explain the basis for its conclusions. It is API's understanding that the 932/941 MHz MAS applicants were not required to provide any information regarding their intended use of this spectrum. Accordingly, API is curious as to what type of information the Commission relied upon in the paper versions of the applications, whether the Commission reviewed all 50,000-plus applications and, if so, when it conducted such a review.